PROSPECTUS

OF THE

Golconda Gold Company,

CANADA.

Including Maps, Descriptions of the Mines,
Official Reports and Assays
of the Ores.

New York:

RAYMOND & CAULON, PRINTERS, No. 88 CEDAR STREET.

1867.

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The EDITH *and* LORNE PIERCE
COLLECTION *of* CANADIANA

Queen's University at Kingston

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REPORTS

UPON THE

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REPORT OF PROF. HITCHCOCK,

MINING GEOLOGIST,

Late Geologist of the State of Maine, formerly Assistant State Geologist of Vermont and Lecturer on Geology and Mineralogy, Amherst College.

GENTLEMEN: At your request, I herewith present you with the results of my observations upon the valuable auriferous rocks and alluvial deposits upon a tract of land belonging to you in Ascot, C. E., and incidentally of its relations to the surrounding country and neighboring gold districts. My numerous engagements in the vicinity have enabled me to spend nearly a year in the country and to visit this property five or six times. My first visit was in October, 1863, and the results of my investigations at that early period of the development are embodied in a Report to W. S. Hunter, Esq. The positions taken in this Report have been fully corroborated by subsequent development and the detailed Reports of Professor Tuck and Dr. Kent. The other visits were made in December, 1863, June and July, 1864. In September, I visited the region, and heard satisfactory reports concerning the development of the property under the efficient and skilful management of Prof. Tuck.

I have had occasion to see many scientists and business men who have visited the mine with their eyes blinded by prejudice; but they have invariably returned fully convinced of the great richness of the deposits.

Location.

The site of the diggings is seven and a half miles direct, or ten miles by the carriage road from Sherbrooke, the principal village in the "Eastern Townships" of Canada. The territory is embraced within lots Nos. 2 and 3, of Range XIII., of Ascot. When the Massawippi Railroad is completed, between Newport, Vt., and Waterville, C. E., this mine will be four miles from the "Outlet Station, communicating with New-York by a shorter route than by way of Sherbrooke and Montreal or Boston.

Topographically, the Golconda deposits are situated in a tract of country 8x3 miles, or 24 miles square, covered with auriferous gravel, and sloping northwesterly towards the Magog River. This broad slope is intersected by the valleys of several small streams, one of which is Grass Creek, running through Range XIII. The band of auriferous rock is probably from three to four miles, extending thus narrowly from Lake Memphremagog to the township of Ham. It is invariably a mountainous ridge, but rarely worn down so much as over this sloping tract of 24 square miles. Over the whole extent of this range gold has been found, in greater or less quantities. No site upon Grass Creek is more eligible than this. Above, the stream is smaller and the gold apparently less abundant. Below, the country is flat and marshy, although rich in gold.

Nature of the Property.

This consists of 250 acres of wooded and cleared lands, with various improvements which I need not enumerate. You have a length of stream about one and a quarter miles.

GEOLOGICAL RELATIONS.

The accompanying maps will show the connection between the Ascot gold and that obtained from the other valuable regions in Eastern North America. Commencing at Nova Scotia, the belt makes a majestic curve across to Newfoundland and Gaspé, runs down to the Chaudière and Ascot, thence to Vermont and the Southern States. The rock is of lower silurian age, called the Quebec group in Canada (about the age of the calciferous sandstone and chary limestone of New York), and consists of various shades of talcose, argillaceous and arenaceous and schists and slates, with imbedded and intersecting veins of quartz.

I desire to call your attention to two geological features indicated by the maps. *First:* The most important gold regions on the Chaudiére and in Vermont have precisely the same geological position with the Ascot deposits. They all lie at or near the eastern boundary line of the lower silurian rocks. Gold is found to the west of this boundary; but experience proves that the most valuable of the lower silurian gold deposits are near this line. *Second:* The narrow belt of lower silurian rocks, upon which the Ascot deposits lie, has been brought up from a lower depth than the main bulk of the formation; and is consequently more highly metamorphic, having been subjected to deep seated chemical action for a longer time. In consequence thereof, I believe it will prove more abundantly charged with metals than the rest of the same formation, even on the same line on the Chaudière and in Vermont. This is already shadowed forth by the superior nature and amount of the copper ores mined in Ascot, in such mines as the Clark, Sherbrooke and Capel.

MAPS.

Two geological maps accompany this Report: one shows the connection between the gold deposits of Vermont, Canada and Nova Scotia. The formation makes a great curve at the Straits of Belle Isle, so as to connect the two ends, although a portion of the distribution is concealed by the waters of the Gulf of St. Lawrence. The other map shows the distribution of the lower and upper silurian rocks in the auriferous belt of Canada and Vermont. A narrow yellow strip, extending from the Chaudiére through the Golconda property to Lake Memphremagog, indicates the position of the highly metamorphic auriferous belt. Gold occurs over the upper silurian to the coast of this belt, but chiefly as drift gold.

AGE OF THE GOLD.

An examination of the Golconda and Chaudiére mines indicates that the gold has been infiltrated into two classes of rocks—the lower and upper silurian. The latter are more calcareous and argillaceous than the former, and occupy the greater portion of the country between the lower silurian and the United States boundary line, as well as an isolated basin northwest of Ascot. The pyrites which are so abundant in the gravel, are largely derived from the upper rocks, and should be specially examined with reference to their capacity to yield gold and silver. In my first Report is a section showing the different layers of gravel and their peculiar constituents—some with much, and others with little pyrites, &c. The different layers were derived from different sources; *e. g.* one from the slaty upper rocks, and another from the hard schists of the lower group; while a third may contain a mixture from both.

Two kinds of gold occur in your placers—the rough and the smooth shot variety. They are probably derived, the one from the upper, and the other from the lower rocks. The creek may bring down one class, wearing them from the ledges, and the other class may have been assorted and redeposited from the great mass of unmodified drift which spreads over all your property away from the bed of the creek.

The line between the isolated group of upper rocks and the northern edge of the metamorphic belt appears to run across your property. That explains the commingling of the two kinds of gold in the same pay dirt. The band of auriferous schist yielding $23.26 of gold to the ton, lies between the two rocks, so as to make it difficult to decide to which group it belongs.

Occurrence of the Gold.

The gold, as already mentioned, occurs in three forms on your property: in quartz veins, in the schists, and in the gravel. The second mode is an unusual one, to any great degree, in gold countries. In my first Report, and in those of Prof. Tuck and Dr. Kent will be found the special details of the location and dimensions of the different deposits and leads. The earlier assays gave $15.50 and $23.26 of gold to the ton of two samples of quartz, and $23.26 of gold to the ton in some schists. It is only a particular portion of the slaty rocks that is thus valuable: that near the Boarding House, whose width is undetermined, but extensive. Gold occurs in the rock over every portion of the tract, but not everywhere in large amount. The pay dirt examined by Dr. Kent afford a yield of $2.07 of gold to the bushel.

Amount of Gold.

Two vital questions are always put respecting a gold property: *First*, Is there plenty of gold in the soil or rock? and *Second*, Can it be extracted profitably? In supporting the affirmative to both these interrogations, let us state the ground of the support.

(*a*.) The Golconda auriferous tract is situated upon the grand gold-bearing belt of Eastern North America, as shown in the map.

(*b*) It is situated near the eastern border, along the line of greatest richness, according to observations in Canada and Vermont.

(*c*.) It is situated upon a subordinate band of rock more highly charged with metalliferous matter than the great part of the formation.

(*d.*) The amount obtained from the gravel, by the experiments of all those who have examined it professionally, proves the great and uniform richness of the deposits. The results of the past summer's work are especially important, as they are derived from systematic and extensive operations. Prof. Tuck's estimate of three millions of gold in the gravel is not extravagant.

(*e.*) There is every reason to suppose that the property contains thousands of tons of auriferous quartz and schists. The gold in the rock is far more abundant and valuable than that in the gravel.

PROFIT OF EXTRACTION.

The following statements will go to show how reasonable it is to expect large profits in working these gravel beds and auriferous rocks.

(*a.*) Labor is easily obtained, and remarkably cheap for gold regions.

(*b.*) There will be no expense for the transportation of ores to great distances. The gold taken from the soil is money.

(*c.*) The gravel deposits can be washed by the hydraulic method a considerable portion of the year. The past summer has been one of unusual drought. The works constructed by Prof. Tuck are well adapted for future operations on a grand scale.

Some idea of the amount capable of being obtained from the gravel may be acquired by recalling the minimum amount that can be washed profitably. Wm. P. Blake says that in the Southern States earth containing one twenty-fifth part of a grain of gold to the bushel (value one-fifth of a cent) can be profitably washed. The Golconda earth carries $2.07 of gold to the bushel. Even allowing largely for fine gold wasted, the yield of gold by this mode of washing must be highly profitable.

(*d.*) Some idea of the profits arising from the crushing and amalgamation of the auriferous leads may be obtained by a comparison of the value of your rock as assayed by Dr. Kent, with that of well-known gold properties in other gold producing regions. Your quartz carries $15.50 and $23.26 to the ton. On the Mariposa estate the Princeton Mine (considered the best) furnished, in 1863, 62,000 tons of quartz, yielding $20 per ton. In 1864 the same mills, in 540 days aggregate work, crushed 24,013 tons of quartz, yielding $16 per ton. Green Gulch now averages $14, and Mount Ophir $16 per ton.

J. A. Phillips, Mining Engineer, writes as follows, concerning the results obtained by the Colonial and Port Philip Company, in Australia. Speaking of ores yielding small amounts, he says: "It must be observed, that to obtain a satisfactory profit from ores of this class, it is necessary, not only that large quantities should be treated, but also that the greatest economy should be observed in every department of the manipulation.

"The quantity of quartz crushed by this company, between Oct. 1, 1860, and Sept. 30, 1861, was 32,258 tons, from which the produce was 24,336 oz. 6 dwt; being an average of 15 oz., 2 dwts. per ton. The quantity crushed during the preceding year was 21,693 tons, from which the produce was 17,466 oz.; being an average of 16 dwts. per ton: showing an increase in crushing of 10,563 tons, and on the yield of gold of 6,870 oz. over the same period of the previous year.

"It will be perceived that the yield of gold per ton had experienced a variation of 22 grs., equal to 5 3 4 per cent. The total expenditure per ton, has been 12s.; in the preceeding year it was 16s. The profits on the quartz crushing, for the year ending Sept. 30, were £22,958 16s. 5d."

The yield of your leads is not inferior to that of the examples quoted above, and skillful management ought to produce equally profitable results. And, inasmuch as the schists contain a large per cent. of gold, the extraction of gold from them can be more economically conducted, on account of their being more easily crushed.

(*e*) You have the advantage of a location near New York. Enough has been said to prove the great value of the Golconda deposits, and the probability of a profitable extraction of the gold from both the gravel and the ledges. To say more is unnecessary.

Respectfully,
Your obedient servant,
C. H. HITCHCOCK,
Mining Geologist.

To H. A. Tucker, Esq., and associates,
No. 4 Broad Street.

No. 37 Park Row, New York,
Dec. 16*th*, 1864.

EARLIER REPORT OF PROF. HITCHCOCK.

W. S. Hunter, Esq.,

Dear Sir: Having visited recently, at your request, and in your company, the gold mining property owned by yourself, in Ascot, C. E., I submit the following Report concerning the geological relations of the country, and my impressions concerning the value of the property.

The property is situated upon Grass Island Creek, in the south-west part of the township of Ascot. The country is covered with thick alluvial deposits, sloping gradually towards the bed of Magog River, for a distance of several miles. Grass Island Creek runs near the summit of the ridge, and flows in a north and north-west direction for several miles, before uniting with the Magog waters.

A belt of peculiar argillaceous schistose rock, abounding in veins of *white quartz*, underlies the whole of this broad slope, running in a north-east and south-west course.

Two fixed localities will enable me to describe the claim clearly. *Discovery Bar*, where the gold was first brought to your notice, is situated at a sawmill, the only one upon the creek. About a quarter of a mile higher up the stream is *Enoch's Bar*, where a long sluice has been constructed. Here the most of the gold now in your hands was discovered. Sufficient examination of the stream, both above and below, has been made to prove that the deposit is an extensive one, and that the claim under consideration is not merely an oasis in a desert.

I will describe the appearances of the auriferous gravel and the rocks, and Discovery and Enoch's Bars.

The flat at Enoch's Bar is 20 rods wide. At two points the rock has been struck, say at the depth of three and five feet. The gravel is generally much thicher. Small benches of gravel rise up on each side of the flat, perhaps 15 feet high, and the country rises very gradually, back from the benches upon both sides. Thick gravel beds, of unknown depth, occupy these slopes.

The whole of the lower flat is reticulated with old courses of the stream. Doubtless every part of the interval has first or last been washed over by the creek.

The following section will give some idea of the character of the different layers of gravel at Discovery Bar, the upper layers of which occur at Enoch's Bar.

Vegetation.

Loam and soil.
Gravel with yellow clay cement, containing many cubical crystals of iron pyrites.
Coarser gravel with grey clay cement—pebbles mostly of talcose schist, with angular fragments of auriferous quartz.
Ferruginous clay, 2 ft. wide—containing gravel and crystals of iron pyrites.
Blue-black clay with gravel, containing many streaks of decomposing magnetic iron—called "Burns."
Very coarse gravel with the talcose clay.

Quartz leads. Bed rock. Schist. Quartz leads.

The whole thickness to the bed rock is from 10 to 15 feet, and upwards. The whole series is highly auriferous, at least 35 feet thickness of gravel back from the creek.

I also present a rough pen-sketch of the position of the gravel in its relation to the rock, and the surface of the ground at Enoch's Bar.

Near the middle of the valley at Enoch's Bar, is an interesting vein of porous quartz, apparently 15 feet wide. This, and similar veins elsewhere upon the property, are undoubtedly the source of the gold in the gravel.

At Enoch's Bar I washed a small parcel of gravel and obtained seven or eight cents worth of gold. A gentleman with me washed out 75 cents worth in a larger panfull. This was at the sluice. At a ditch, a few rods west, a panfull of earth produced 15 pieces of fine gold, washed out under my inspection. At Discovery Bar several pieces were washed out of several pansfull, but the quantity obtained was not so great. These washings were made to satisfy me of the occurrence of the gold at the different localities; and I took special pains, unknown to yourself, to see that no imposition was practised upon me, although I had no reason to expect that any fraud was attempted.

The sluice I saw in successful operation, and the quantity of gold obtained from it the day of my visit (Oct. 20), was estimated to be from $8 to $10 in value. I saw it removed from the boxes. But from the rude nature of the sluice, and the coarseness of the grains, I have no doubt but that, perhaps, one-half of the gold contained in the gravel is not saved. No quicksilver was used to retain the fine dust, and very much gold must have passed away with the tailings.

It is estimated by your men, I believe, that about one-half of the gold lodges in the boxes, to be obtained only from the ashes left by burning them, while one-third of the whole passes away in the tailings; thus leaving only one-sixth of the whole where it can be secured.

The gold is the variety called "shot gold," and it is evidently of a very fine quality,—much like that obtained from the Chaudiére region, which by the assays of Professor T. S. Hunt, of Montreal, has been found to be richer than the Californian or the Australian gold.

I must refer to your own accounts for a knowledge of the amount of gold which has been obtained by your workmen upon Grass Island Creek. At a very early stage of the operations, I believe, fifteen cartloads of gravel yielded about $35 worth of gold. The amount of gravel shoveled into the boxes on the day of my visit was about what one man could put into the sluice in one day.

But as a delay of a week has unavoidably occurred in the preparation of this report, it may be proper for me to state, upon the testimony of visitors to the property, that the amount of gold obtained from the sluice since my visit has greatly increased. The sum stated is so large that I will not venture to name it, but can have no doubt that the quantity produced is much larger than at the time of my visit, and is sufficient to pay a very large profit upon the labor expended. The work already accomplished, is evidently more of the character of prospecting than of permanent operations—the preliminary work which is necessary to establish the value of the property.

The conclusions at which I have arrived concerning your gold claim in Ascot, may be expressed as follows : *First.* The mineral character of the underlying rocks, and the superficial gravel identifies the region geologically with the auriferous regions of the Chaudiére, of North Carolina and California. Still the region is a limited one in extent, and does not connect (except at great depth beneath the surface) with the Chaudiére region. The geological age is the Quebec group of the lower silurian.

Second. Opportunity is afforded upon your claim, both for the washings from the gravel, and for the mining of the gold from the quartz—by crushing and amalgamating.

Third. The amount of gold obtained from the gravel is greater in proportion to the labor expended than that obtained from the neighboring region of the Chaudière, and I have reason to believe that, in this respect, the Ascot field compares favorably with California and Australia.

Hence I cannot hesitate highly to recommend your gold property, and am firm in the belief that the amount of gold produced from it will yield abundant profit to the capital employed in working it.

With sincere respect,
Your obedient servant,
C. H. HITCHCOCK,
Geologist to the State of Maine.

SHERBROOKE, C. E.,
Oct. 28*th*, 1863.

REPORT OF PROF. KENT,

CHEMIST, UNITED STATES ASSAY OFFICE, NEW YORK.

NEW-YORK, June 14th, 1864.

DEAR SIR: Agreeably to your request, I left the city on the 6th instant, and visited the Golconda Gold Mines, at Ascot Township, near Sherbrooke, Canada East, and after a careful examination of the property, I brought home samples collected under my own supervision, which I have assayed since my return.

The mines are alluvial washings, or "placer diggings," situated about ten miles from Sherbrooke, which is a small town at the mouth of Magog River, and on the line of the Grand Trunk Railroad from Portland to Montreal. About twenty-five men are now employed on the property, and the principal work done, up to the time of my visit, has been devoted to the construction of a road through the woods, and a small canal or ditch on the brow of the hill, or highest land on the property, of about one and a quarter miles in length. The ditch is supplied with water from a small stream running through the property, on which has been constructed a dam suitable for supplying a sufficient quantity of water for sluicing.

Where excavations have been made, the deposit of gold appears to be in coarse talcose slate, partially decomposed, and to get at this for sluicing, the surface, which is covered with heavy timber, has to be cleared, and the roots, undergrowth, and, finally, the soil, to the depth of about two feet, removed. The depth of deposit or pay dirt could not be determined at any of the openings now made, some of which are several feet deep. At the time of my visit the surface was being cleared for washing, but the process of sluicing was not then in operation.

The sluices used for washing the pay dirt are of the simplest construction, and similar to those used in other placer diggings. On examination of the residue left in the sluices from former washings, a considerable amount of gold could be seen at each riffle formed by the lapping of the joints. No screens, riffles or mercury are now used in washing, and with the addition of some or all of these, probably more *fine* gold would be obtained, with but little additional expense or trouble.

The small stream running through the property is called Grass Creek, and this has been turned to supply the ditch above mentioned, by the construction of a dam, and the overflow or waste water from the dam is now the only water in the stream. Several pans of gravel from the bottom and banks near the water were washed, and a small amount of gold was obtained, accompanied by black sand or magnetic iron, such as is usually found in alluvial gold deposits. On the west bank of this stream are two outcroppings of quartz veins, with walls of slate, which were examined, and samples taken for assay. The first or upper vein is situated above a second or lower dam, which is now being constructed to collect the overflow of water from the upper dam. This vein is about 8 inches wide, and is accompanied by smaller veins of from 1 to 2 inches in width, the whole embraced in a stratum of 2 or 3 feet, from which some of the specimens marked No. 1 were taken, and found to contain gold to the value of $15.50 per ton of 2,000 pounds.

On the same bank of the stream, and just below the lower dam, is another vein of quartz over 1 foot wide, accompanied by another 6 inches wide, in walls of clay slate, partially decomposed. A sample of these, marked Quartz No. 2, was found, by assay, to contain gold to the value of $23.26 per ton of 2,000 pounds.

The alluvial deposit being now ready for examination, by clearing the surface and making an excavation about 4 feet deep, a panful of the dirt containing about 6 quarts, was taken from several different spots under my direction, and washed by myself, in the stream near by. From this one pan four large grains of gold weighing 5.77 grains were obtained and preserved in vial sample No. 3. At 4 cents per grain, this result is equal to $1.23 per bushel of pay dirt.

Another panful of the same was partially washed in the stream, and the balance dried and taken home for separation in the laboratory. The weight of the residue was 13 ounces, and was found to contain: coarse slate, 4 ounces; cubic crystals of iron pyrites, $\frac{3}{4}$ ounces; gray sand, 8 ounces; black sand, 7 grains; visible gold, 7.14 grains. The value of the visible gold obtained by this more careful washing and separation equals $1.52 per bushel of the pay dirt as taken from the deposit. The gold obtained from this is herewith enclosed in vial marked No. 4.

Another sample of the pay dirt from the bed of deposit was taken in its natural condition (without washing) for assay for *fine* gold, probably lost in the operation of panning. The sample weighed, when dry, 6 pounds 2 ounces, and contained 5 pounds 5 ounces coarse lumps, and 13 ounces fine, decomposed talcose slate which equals 28 pounds 5 ounces lumps, and 4 pounds 5 ounces finest portion to a bushel. This finest portion was found by assay to contain gold to the value of 70 cents in 4 pounds 5 ounces, or one bushel of pay dirt, in addition to the visible gold obtained by panning,

—which in this case was separated by a seive containing 400 meshes to the square inch, and that only which passed through was used for assay. Taking the average of these results as the basis of calculation, the value of the pay dirt in the locality examined is $2.07 per bushel.

By the rude process of sluicing now used at the mines, the *finest portion* of the gold is probably lost to a great extent, or partially deposited in other localities below. By improved processes and skilled labor, the *fine* gold may be saved, as well as the coarse, or by very simple processes the finest portion of the pay dirt, containing the finest gold, may be saved and sold to a company now being formed for the metallurgic treatment of gold ores on scientific principles, in this city. If the sample assayed is a fair average in value, the finest portion of pay dirt, after separation of the coarse lumps, is worth $5.22 per bushel, or $324.70 per ton of 2.000 pounds.

A sample of the tailings, or washed residue, was taken from a pile opposite the end of the sluice, and after drying was taken for assay. From an examination of this, it was easily seen that the decomposed talcose slate had been entirely removed by washing, and with this the fine gold had also disappeared, as no gold could *now* be obtained from the finest portion of this by the process of amalgamation. The coarse lumps were hard, grey slate rock, instead of the soft unctuous talcose slate obtained from the bed of deposit. On assay of these lumps, they were found to contain gold to the value of $15.50 per ton of 2,000 pounds, after being crushed and sifted, to exclude any coarse grains of gold if present. As the slate is easily crushed, I am inclined to believe that it could be profitably worked for gold, in the same manner that quartz veins are usually worked.

In conclusion I have to state that, from this chemical examination of the products of the mines, I consider the property very valuable, and the deposit of pay dirt unusually rich in gold; but, as to the extent of the deposit, or the cost of working, I have not informed myself.

Yours, very respectfully,

EDWARD N. KENT, Chemist.

LATER REPORT OF DR. KENT.

New-York, July 14, 1864.

Dear Sir: On my second visit to the Golconda Gold Mines, in Canda East, I found that preparations had been made for washing gold, and consequently the operation was commenced immediately, and continued in one hour, with nine men employed, viz.: Four men with shovels and picks, two sluice tenders, and three men removing the tailings from the end of the sluice. The bed rock was struck at about three feet below the soil. The sluice was composed of twelve boxes, each twelve feet long, and the fifth box contained riffles for about one-third of its length.

After washing one hour, with the nine men actively employed, it required the same men about half an hour to clean up the sluices, and two men one quarter of an hour each to pan off the remaining sand. As this operation of cleaning up requires to be done but once a day, it is fair to estimate the cost at one-tenth the actual cost for one hour's washing. The gold obtained in this operation, when separated from the black sand, weighed 17 pennyweights, 20 grains, and the black sand weighed 8 ounces, troy.

On the property is a saw-mill, apparently in good working order, with a considerable quantity of new lumber recently sawed, but at present there is not sufficient water to run the mill.

The boundaries of the property were pointed out, and several pans of dirt were washed from different places, and gold was found in each case, but in smaller quantities than was obtained on my first visit to the mines, by panning from the spot where they were then, and are now engaged in sluicing.

A large deposit of yellow decomposed talcose slate near the saw mill was examined, and a sample of the same assayed for Mr. Jackson was found to contain gold to the value of

$23.26 per ton of 2,000 pounds. Two pans of this were washed on the spot, and gave each a fair show of gold. A considerable quantity of this deposit has been removed and washed, but I was informed that but little gold had been obtained by sluicing. This deposit could be best worked by grinding and amalgamation; but the yield of gold could not be so large as indicated by the assay, and as there is not sufficient water to drive quartz mills, steam power would have to be used. Wood, however, is abundant and cheap and requires only the cost of labor in cutting and hauling.

On the west bank of the creek, about midway between the dwelling-house and saw mill, is an outcropping of a large ledge of slate, containing cubical crystals of iron pyrites. A sample of this was taken for assay.

Below the saw mill dam sluices had also been erected, and the surface-soil removed for the purpose of making another experiment in washing. As I predicted, this proved to be the best locality on the premises. Eight men employed here in washing one hour with sluice same size as the first, obtained 19 pennyweights, 18 grains, clean gold.

A prospect hole was dug under my direction on the high land composing the west bank of the stream, or opposite to the present working, at a distance of about two hundred feet from the stream, and about two hundred feet north of the house. A ledge of slate rock was struck at four feet in depth, and a sample of it, marked No. 2 was taken for assay.

A panful of dirt from this prospect hole was washed, and some visible gold was obtained, which proves that the deposit is not confined to the east bank of the stream. The gold and black sand obtained from this and several other holes are contained in the sample vials herewith enclosed.

Below the two upper dams the west bank of the stream has been stripped since my first visit, and several other veins of quartz exposed to view. The whole west bank is composed of slate and quartz, and a sample of the quartz from the newly-discovered veins from this locality was marked

No. 3, and taken for assay. Another sample, from a vein twenty rods above, was marked No. 4, and taken for assay.*

A prospect hole on the east bank of the stream, near the above quartz veins, was examined, and from one panful of the dirt ten small particles of gold were obtained. Other samples of dirt were taken from an excavation near the upper dam, and also from the sides of the ditch, and in every case some gold was obtained, from which it is pretty evident that the deposit extends over a large portion of the property, but the quantity of gold is variable.

Yours, very respectfully,

EDWARD N. KENT,
Chemist.

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* For assays of these rocks &c., see following reports and certificates. ---*Ed.*

A REMARKABLY RICH PLUSIATIC DILUVIAL AURIFEROUS DEPOSIT, (GOLD-SEIFEN-GEBIRGE,) IN THE TOWNSHIP OF ASCOT, CANADA EAST, OWNED BY THE GOLCONDA GOLD MINING COMPANY, OF NEW YORK.

Several years ago—I believe in the year 1863—there was discovered by merely speculating prospectors, in Canada East, township of Ascot—one of the so-called eastern townships—between the towns of Sherbrooke and Compton, not far from Lennoxville and the Grand Trunk Railroad leading from Portland, Maine, to Montreal, a net-work of auriferous quartz-veins, in some places surrounded and covered by an alumino-arenaceus deposit of an equally auriferous nature belonging to a gold-bearing belt, commencing, South, immediately on the north-eastern shores of Lake Memphremagog, and extending in width, wedge-shaped, in a northern direction, and in a curve nearly parallel with the great St. Lawrence River, to Nova Scotia.

This auriferous belt, of a very unequal richness in the precious metal, originates in the upper Silurian formation around Lake Memphremagog, runs in it for more than 50 miles, but separates, further north, the lower Silurian rocks, north-west-wards, from the upper Silurian, south-east wards.

The gold-bearing quartz-veins of that belt run most generally in black hornblendic and talcose slate, abounding in cubes of Titanic Iron of different sizes, nevertheless not exceeding a quarter of an inch in length and width. Their strike appears to be uniformly from N. W. to S. E ; their dip consequently at right angles to that direction, and in different slopes.

The above remarkably rich placer was scarcely discovered, when it was disposed of for a large sum of money, and came ultimately into the possession of the enterprising Golconda Gold Company, by which it is now worked with energy and success.

The mentioned auriferous deposits—now called the Golconda Deposits—have been carefully examined by my learned friend, Professor C. H. Hitchcock, and other geologists, whose repeated reports have thrown much light upon them, and not only these reports, but especially the assiduous labors now, since more than two years, bestowed upon the property, allow a more particular description and scientific classification.

One of the richest, if not the actually richest part of the above mentioned auriferous belt—more properly at the Ascot deposits and veins,—appears to be contained in the 250 acres of ground, extending about one and a half miles along Grass Creek, especially on the south-east side of it, sloping towards Magog River, which constitute the property of the Golconda Gold Company, of New York.

This rich deposit is within the territory of the above Company, fully half a mile long, and, at an average, 12 rods or 200 feet wide. It is traversed from N. W. to S. E. by eight different auriferous quartz-veins or lodes, of different thickness, from a few inches to several feet, which run all in hornblendic and talcose slate.

The depth or thickness of this remarkable deposit differs from 10 to 30 feet; it averages, therefore, 15 feet. It is covered by a yellowish loamy soil, 3 feet in thickness, mostly overgrown by forest trees and other vegetation.

According to Professor C. H. Hichcock's examination and report, and the appearance of the denudation, by the labors of the Company, the following section represents the different strata of the deposit:

1. Loam and soil overgrown by forest trees and other vegetation.
2. Gravel with yellow clay and many cubical iron pyrites.
3. Coarser gravel with grey cement—pebbles of talcose schist, with angular fragments of auriferous quartz.
4. Ferruginous clay 2 ft. wide—gravel and iron pyrites.
5. Blue-black clay with gravel and decomposed magnetic iron ore.
6. Very coarse gravel with talcose clay.
Bed-rock.

Stratum No. 1 is not gold-bearing; the auriferous character of the deposit commences below that loamy surface-soil, and continues through all the other strata, from No. 2 to No. 6.

This section clearly indicates that the different layers of the materials contained in the deposit are arranged according to their specific gravity thus: stratum No. 2 contains principally clay with finer gravel, and some titanic pyrites. Stratum No. 3 encloses coarser gravel, pebbles of talcose slate, and fragments of auriferous quartz.

Stratum No. 4 contains heavy ferruginous clay, gravel, and iron pyrites. Stratum No. 5 encloses black-blue (also ferruginous) clay, and magnetic iron ore. Stratum No. 6 lastly, contains very coarse gravel and talcose clay.

As now gold, ranging in its *native state*, in specific gravity of from 15 to 19 times that of pure water, is much heavier than all the other enumerated contents of the deposit, it follows that the lower strata are probably richer than the superincumbent layers.

The Golconda Deposit, to which alone I confine my remarks, has been repeatedly examined and reported on; it can therefore not be my object to go further into such particulars as have already been fully elucidated and developed, but it appears to me that its nature and origin, and consequently, also, *its great importance*, have been further developed by the labors of the Company, and such developments alone will be the objects of my considerations and remarks.

The Deposit of the Golconda Gold Company can, according to these developments, no more be called *an alluvial deposit;* this would imply an origin from a later period of the present quaternary geological age of our globe, and the agency of a simply local stream of water—perhaps of the same insignificant creek which now runs through the north-western part of it—and would consequently contradict a great richness and great importance of the deposit, for simply local and small streams of water run comparatively only a short distance, and through few geological formations; their agency is in every respect limited, and they are unfit for the accumulation of materials of great variety and richness.

Such an origin, or, more generally speaking, the *alluvial* character of the deposit here in question is categorically contradicted, not only by its nature, but especially by its contents.

The deposit consists of five different strata, conformably superimposed. I do not here mention the first stratum of disintegrated surface soil; it is certainly only a later alluvial and atmospheric accumulation, and does not belong to the rich and important plusiatic diluvial deposit. The annexed section clearly exhibits that each stratum differs entirely from the other in its mineralogical character, the deposit could, therefore, not have been accumulated by the agency of a short and small stream, which does not run through formations containing the accumulated materials. This circumstance alone would be sufficient to contradict the alluvial character of the deposit, but there are other strikingly contradictory proofs, which I will consider in the course of my remarks.

Deposits of metalliferous detritus of a variety of mineral substances have, at a very early period of the short existence of the science of Geology, been the subject of careful examination of scientific men, especially in Europe, and it has been proved and settled by them, principally by A. Brongniard, of France, that such deposits cannot be of a merely alluvial character—cannot have been produced by abrasion and conveyance of our modern rivers, not only because the time of their existence has been too short, but principally because the mineral and metallic contents of such deposits consist generally of matter whose original locality is and ever has been beyond the reach of such rivers. It is, therefore, now, generally admitted that such deposites must originate from an earlier period of the existence of our terrestial globe, characterized by a more powerful disintegrating and transporting agency—from the Drift, Glacial or Diluvial Period—intermediate between the Tertiary and Quaternary Ages of our globe.

Such deposits are indeed of the greatest importance for human economy; they have furnished and continually furnish us with the largest part of our precious metals and stones, and have therefore been termed by Mr. Brongniard Plusiatic Diluvial Deposits. The German geologists and miners call them Seifen-Gebirge, and if they are auriferous, *Gold-Seifen-Gebirge.*

These deposits consist generally of disintegrated masses of clay, loam, angular pieces of quartz, pebbles, quartz-sand, mixed with larger or smaller quantities of disintegrated magnetic iron ore, and of different fragments of rocks of the gangue and walls of the metallic veins. In these deposits occur, besides, smaller and larger fragments of native common and precious metals, as gold, platina, tin, copper, iron, lead, etc. Of the precious and more valuable stones they contain generally diamonds, topaz, garnets, amethysts, zircon, corundum, spinel, rutile, quartz, of different colors, iron pyrites, titanic and specular iron ore, oxide of iron, etc.

Nevertheless not all of these metals and stones occur in the same plusiatic diluvial deposits; they are therefore divided, according to their more precious contents, into diluvial deposits of gold, platina, tin, and diamonds.

The technical and economical importance of all the above four classes of plusitic diluvial deposits is at once evident, if we remember that nine-tenths of all gold, absolutely all the platina, by far the largest and best part of the tin—all the English and Saxony stream tin, all the East Indian, Banka and Ceylon tin—and absolutely all the diamonds, and most of other precious stones, in possession and use of man, originate from such deposits.

The plusiatic diluvial gold-deposits, which alone interest us here, are indeed very common and numerous, and have, therefore, been discovered and made use of since the earliest infancy of mankind. Only very few bottoms of long and considerable rivers are without grains of gold, but they are most generally by no means rich enough to remunerate mining operations.

Even in such river beds—the auriferous detritus is not merely *alluvial.* It is generally taken from *diluvial* deposits traversed by these rivers, transported by the stream, mixed with the alluvial sediment, and accumulated in different places. Such secondary diluvial or *diluvio-alluvial* deposits can therefore not be rich, and never pay expensive mining operations.

Respecting the deposit of the Golconda Gold Company, of New York, we have already seen that it consists of five different strata, (see section,) of primary matter —clay, gravel, and sand—each differing from the other in its peculiar character, and that this important circumstance must render a simply alluvial nature of the deposit, if not impossible, at least in the highest degree improbable. This disproof of the alluvial nature is strengthened by the secondary contents of the different strata.

Like all other similar deposits, the Golconda deposit contains, beside the primary sedimentary matter, consisting in clay, loam, sand, gravel, etc., a great variety of most important secondary matter, which most probably pervades in a higher or lower degree all five strata belonging to the deposit.

After the careful washing of the earthy matter of the deposit and its freeing from clay and loam, there remains a residue of rather coarse black sand, constituting about five per cent. of the whole mass. This residue contains all the matter of higher specific gravity, and consequently all the gold, and fragments of precious and valuable stones. I have carefully examined this residue of dark sand with sufficiently powerful microscopes, and found in it besides from 10 to 15 small particles of gold in each drachm—more in form of minute nuggets than in foliated and angular pieces—fragments of the following precious stones:

1. Crystals of White Zircon.
2. Corundum.
3. Topaz, common and smoky.
4. Spinel.

5. Amethyst.
6. Chrysoberyll.
7. Rutile.
8. Garnets, etc.
9. Quartz of different colors, etc.

All of which appear more or less rounded and waterworn.

There are besides, among this black sand, fragments of iron pyrites, small cubes of Titanite of iron, oxide of iron, fragments of graphite, and the very large quantity of 32.08 per cent. of magnetic iron ore, partly appearing like filings, partly in rounded grains.

It is admitted by geologists and mineralogists that a large quantity of magnetic iron ore in diluvial detritus is always an indication of richness in precious metals; if, therefore, the many visible particles of gold were not sufficiently conclusive, the large quantity of magnetic iron ore would perfect the proof.

If we now consider the above secondary contents of the Golconda deposit in Canada East, and remember that all such metals and minerals are invariably found in plusiatic diluvial deposits fully acknowledged to be such, if it be evident that a small river or creek, like Grass creek, could not have accumulated a detritus of such materials, originating in different and distant localities, entirely out of reach of any local stream; if we furthermore consider that the whole of this deposit is thickly overlaid by large and small boulders of Greenstone or Diorit, Serpentine, Granite, Sienite, etc., of acknowledged diluvial origin, then it can no longer be doubtful that this treatise has been correctly headed, and that the auriferous deposit of the Golconda Gold Company, near Sherbrooke, in Canada East, is nothing else but one of those most important plusiatic-diluvial gold deposits, and indeed a most remarkable and rich one.*

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* I am of the opinion that the gold of the deposit has by no means been detached from the gold bearing quartz of the underlying quartz-veins in the black slate, however rich the latter may be; if it were, it

It is not difficult to most conclusively not only show, but indeed prove, the great value of this remarkable deposit. All the necessary data are at hand—the difficulty will only consist in impressing an incontrovertible truth upon the mind of the reader, and to prevent him from sneering, simply because the result from arithmetical and logical proofs is too enormous, although not unfounded.

We have seen the length of the rich deposits within the territory of the Golconda Mining Company is 2,640 feet; the width averages 200 feet. The thickness of the five different strata of the deposit is from 10 to 30 feet, it averages, consequently, 15 feet. These data cannot be doubted, they are based upon actual measurement; according to them the deposit contains 7,920,000 cubic feet of different earthy material, partly mixed with metallic sand, fine and coarse gravel, etc.

The weight of the different terrestrial loose soils varies now, according to the best authorities, from 95 to 160 lbs. per cubic foot. The earthy matter of this deposit consists mostly of clay. The cubic foot of such clay weighs 135 lbs. Although the deposit contains a great deal of heavy gravel and metallic sand, which renders it heavier, and would increase the number of tons, we will admit 135 lbs. to be the weight of a cubic foot of it. The 7,920,000 cubic feet of the deposit weigh, then 1,069,200,000 lbs., or 534,600 tons of 2,000 lbs. each. The black sand containing the gold constitutes only 5 per cent. of the whole deposit; the 534,600 tons contain, therefore, only 26,730 tons of this black sand.

According to analysis made under my observation, the ton of this black sand contains from $1000 to $3000 of gold, the

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would be in angular and foliated pieces as it occurs in the quartz, but the gold in the deposit is all rounded off—in real minute nuggets—it is waterworn and has evidently been brought from afar by the agency of water, together with water-worn small fragments of precious stones and other secondary contents of the deposit.

whole 26,730 tons or the whole deposit, consequently the minimum of $26,730,000, or at an average $40,095,000, the maximum of $80,190,000 in gold.

We will only admit the minimum, $26,730,000 in gold, which is in national currency, $36,085,500, but this is not the net value; the labor and capital necessary to realize the gold from the deposit must be subtracted.

It would be too tedious to resort to a minute calculation of the necessary labor and capital, I will admit for that purpose a sum which it cannot exceed: $50 per ton of the black auriferous sand. This would amount to $1,336,500 in currency, and the net value of the deposit will be:—$34,749,000 in national currency.

This is a large sum, and skeptics may deny that the value of the deposit can amount to such a sum, simply because it is a very large one, certainly not on account of the unfairness of the calculation; but no unprejudiced man can doubt, that with an economical and prudent management, the Golconda Gold Company will pay large dividends and enrich its stockholders.

After a careful reflection upon the nature of the Golconda deposit, and the distribution of the secondary contents in its five different strata, some circumstances have occurred to me, which, although not strictly belonging to this treatise, may nevertheless be suggested to the President and Board of the Golconda Company.

I find that the different strata of the plusiatic diluvial deposit, although fully ascertained, have not been examined seriatim. I have already stated that the whole diluvial detritus has evidently been superimposed according to its specific gravity. According to this it is probable that the gold is to be found in larger quantities in the lower than in the upper strata; one or the other of the upper strata may not be at all auriferous. It is most important that this should be carefully ascertained, as it might considerably decrease the expenses of separating the gold from the detritus.

Such a careful examination of the lower strata of the deposit, which contains coarser gravel and stones, might also, and will probably, lead to the discovery of larger nuggets of gold, and of larger and really valuable precious stones, of which small fragments only occur in the black sand. Large nuggets of gold—one of 8 lbs., 2 oz., and another of 3½ lbs. have recently been found in the same auriferous belt, near Gilbert—a tributary of Chaudière river—not more than about 75 miles from the deposit here considered, and there is no reason why they should not as well be found in the rich Golconda deposit, near Magog river. Valuable precious stones are nearly always found in plusiated diluvial deposits, in Europe, Asia, and even on this American continent, namely in California, whose diluvial deposits are in many respects similar to the Canadian; both rest upon the same bed rock—hornblendic and talcose slate.

Respectfully Submitted,

L. HARPER,

Prof. Geol., and Mineral. and Mining Geologist.

RESULTS.

Results of working Black Sand taken from Golconda Placer, by simple amalgamation, at Mines in October, 1866:

100 lbs. Sand concentrated, from stream, after all visible gold was extracted by close panning, gave fine gold $23.20, or per ton of 2,000 lbs. $464.

This result was obtained without roasting or pulverizing, and at least twenty pounds of same being stones etc., material having no value, so that the actual number of pounds should not exceed 80 in this calculation, thus adding one-fifth to the above amount.

1½ lbs. by simple amalgamation, after pulverizing and imperfect roasting, gave fine gold 96 cents, or per ton of 2,000 lbs., $1,280.

W. H. ADAMS,
For Company.

Results of working properly Concentrated Black Sand (same as in the Office at present) by "Monnier Process:"

6 ounces roasted, but not pulverized, gave 57 cents of fine gold, or per ton of 2,000 lbs. $3,040.

2 ounces roasted and pulverized with care, gave 39½ cents gold, or per ton of 2,000 lbs. $6,080; amalgamating with mercury in each case.

W. H. ADAMS.
For Company.

SUPERINTENDENT'S REPORT

Golconda Gold Co.

Golconda Mines, Ascot, C. E.,
January 21st, 1867.

To the President and Board of Directors of the Golconda Gold Company.

Gentlemen: Agreeable to your request, I have the honor to report, for the use of yourselves and the stockholders generally, that since I became the Superintendent of your Mines and Property at Ascot, in Canada East, improvements somewhat extensive have been made, so that at this writing you have in good order and condition a Quartz Mill, 46 by 84 feet, in all respects suited to the purposes for which it was erected, and in which are two of Hughes' crushers, an engine and boiler, of 35 and 55 horse power respectively, two amalgamators and the necessary connections. You have two houses, with the necessary bedding and furniture, suited to boarding and lodging the employees upon your works, with barn, shed, blacksmith shop, and other out-buildings; also a saw mill capable of sawing 3,000 feet of lumber per day, and a large number of logs, taken from your own land, (250 acres) now at the mill to be sawed the coming Spring. Any surplus of such lumber finds a ready market at your mines, but the most of it will be needed during the next season in case you follow the suggestions I shall have the honor to present to you in this paper. You also have twelve of the "old stamps" which have not yet been set up, together with two sets of burr mill-stones complete, and complete sets of "crackers" made of cast iron, all of which I suggest be put in motion when the shaft, now being sunk on your property, shall have attained a depth at which the ore will be largely profitable. Experiments already made on the Quartz and Talcose Slate taken from this shaft, give about twelve dollars gold to the ton, without desulphurizing, and there are four hundred tons of this quartz and slate now lying at the mouth of the shaft, which is some 50 feet deep at present, the quality of the rock improving as the shaft increases in depth I recommend that this shaft be sunk to a depth of at least 150 feet, believing that at that point the ore will be found much richer than at present, although that now taken yields a good result after desulphurization. The parallel veins can also be reached by "drifting," and at the proper depth for good results, their contents being removed through the main shaft. There are three other shafts from 14 to 20 feet deep, sunk upon other sections of your property, showing quartz and slate, which, when crushed and desulphurized, will be remunerative.

About 150 rods of sluicing have been made and now lay upon the placer ready for use, with two dams which will create sufficient reservoirs of water for sluicing during the Spring, Summer and Fall. The upper dam requires an outlay of one hundred and fifty dollars, which I recommend be made at once, and to that end I am now preparing the necessary timbers.

Besides the personal property already named, you have the necessary amount of implements, such as wheel-barrows, picks, shovels, forks, axes, hoes, etc., etc., together with a span of valuable horses, harness, wagons, and the necessary amount of hay, cut on your land for their use, for at least one year. You have also a large amount of fuel ready for use and sufficient for the family occupying your house for two years to come; and all the vegetables necessary for several months, also taken from your land. I may here say: that all these improvements have been made, and all property, both real and personal, paid for in full, so that your Company is at this time wholly free from debt.

I have further to remark, that I have read the Report of Prof. HARPER, with reference to your property, (hereto annexed) and fully concur therein. It has been upwards of two years since I took the supervision of your property, and have been actively engaged upon it during the most of that period, as you are aware, and may not be considered as arrogating too much to myself, I hope, in your judgment, when I say that I am generally conversant with its merits, and am prepared to advise you, that irrespective of the large value I believe is derivable in precious metals from your Quartz and Talcose Slate, yet until the shaft, above spoken of, is at a lower depth, I would reccommend that your efforts be extended to the procurement of the gold in your "Placer" by the "Monnier" process of desulphurization. The refuse material may be all sluiced over your saw-mill dam, and the gold, black sand, and iron pyrites, spoken of in said Report of Prof. HARPER, be concentrated and saved, from which, I have no doubt, there will be handsome results, and such as will be gratifying to each and every stockholder. It is proper further to remark, that while I have only produced a few thousands of gold from this mine during my supervision of it, yet this is a matter of surprise to no one who understands the fact, that the sluicing last season was very limited in consequence of the heavy rains and freshets that prevailed in the locality; and the further fact, that the small crushers in said mill were not put in use until July last, and used throughout the season simply to test the various strata of your placer, and the different veins of quartz and slate outcropping upon your land, with the purpose of ascertaining not only the quality of these strata, but the best mode of reducing them. I may further add, that the bars of gold I herewith send you, weighing some $300 and over, were taken from the amalgamators in your mill, from quartz and pay dirt from your land, averaging about $12 per ton without roasting, (it being understood that the mercury retains an amount of fine gold, necessary to charge it, and which I do not calculate). The gold in the bottle was washed from the south section of your "Placer," a few days before the closing, by frost. There is about $300 of this, which I send you as a sample of the very superior quality of your gold. The yield was about $3.00 gold to each man per day, taken, not to exceed four feet, from the surface; the water filling the pits after the men. It may be proper, in this connection, to observe that during my supervision of your property the average pay to your employees has been one dollar per day, in coin, boarding themselves.

You will have an abundance of lumber by Spring, from your saw-mill, for all the additional sluicing on an extended scale. I have several men now engaged preparing this timber, which is very abundant on your lands. There are, I am informed by your President, about 11,000 shares of stock, equal in par value to $55,000, now in your treasury, which will be used, if necessary, in the procurement of further machinery and to defray incidental expenses, so that the quantity of gold from your mines next year need not be materially reduced. I will be happy to afford you all further data in my power, when required. I repeat, I have high expectations from the judicious management of your property. Very respectfully submitted,

H. P. ADAMS, *Superintendent.*

OFFICE OF GOLCONDA GOLD COMPANY,
119 BROADWAY, ROOM 17,

NEW YORK, *Jan'y* 25, 1867.

To the Stockholders of Golconda Gold Company :—

GENTLEMEN :

Agreeably to the By-Laws of the Board of Trustees of your Company, I have the honor to report that during the summer and fall of last year I spent several weeks at your mines in Ascot, C. E., and became generally conversant, as I believe, with their merits. I witnessed with much interest a large number of assays made by competent gentlemen upon the premises—some of which are set forth in this pamphlet—and I have read the report of Dr. Harper, who enjoys an elevated reputation as a geologist and mineralogist, which report is herewith submitted—and from these evidences as to the merits of your property I have implicit confidence, that, with discreet management, your fullest expectations will be realized. That the *placer* upon your estate contains a large amount of Gold I can have no doubt whatever, and with the proper concentration and desulphurization of its gold bearing elements, saying nothing of your quartz and talcose slate, I am fully of the belief that gratifying results will follow its workings. I recommend to you the plan suggested in the accompanying report of your Superintendent—General Adams—whom I consider a very able and efficient gentleman for the position he occupies. In my judgment he should be encouraged in sluicing the placer on an extensive scale, and substantially as indicated by him ; and while this is being done, I advise that the shaft be sunk to a depth of at least one hundred and fifty feet, with the usual lateral drifts, and that additional machinery be secured for crushing the ores, and desulphurizing them as far as practicable, and for this latter purpose, the "Monnier Furnace" is warmly commended. Recent results from its use upon your "pay dirt," have been highly satisfactory.

I am glad to endorse the statement of your Superintendent that your company is wholly free of debt, and that you own all your real and personal estate in fee, and free from all liens and incumbrances—and as your original capital has been recently reduced to one million, two hundred and fifty thousand dollars par value, I shall hope for flattering results.

Respectfully,
N. E. PAINE, *Pres't.*

ASSAYS.

NEW-YORK, December 27th, 1864.

Statement of Ores Assayed for the Golconda Gold Company.

No. 1.—*Talcose slate*, contains, per lb. avdp.: Gold, 2½ grs.; Silver 1½ grs.
Contains, per ton 2,000 lbs.: Gold, 208 8-24 dwts.; Silver 6¼ grs.
Value per ton: Gold, $215.27; Silver, $8.08, $223.35

No. 2—*Shale slate*, contains, per lb. avdp.: Gold, ½ gr.; Silver, 1 gr.
Contains, per ton: 2,000 lbs.: Gold, 44 16--24 dwts.; Silver, 4 3-20 grs.
Value per ton: Gold, $42.43; Silver, $5.36. $47.79

No. 3.—*Quartz and slate combined*, contains, per lb. avdp.: Gold, ¼ gr.; Silver, ¾ gr.
Contains, per ton 2,000 lbs.: Gold, 2020-24 dwts.; Silver, 3 2-20 grs.
Value per ton: Gold, $21.52; Silver, $4.00. $25.52

No. 4.—*Pure quartz*, contains, per lb. avdp.: Gold, 2 grs.; Silver, ½ gr.

Contains, per ton 2,000 lbs.: Gold, 166 16-24 dwts.: Silver, 2 1-20 grs.

Value per ton: Gold, $172.21; Silver, $2.65. $174.86

No. 5—*Yellow clay*, contains, per lb., avdp.: Gold, 2½ grs.; Silver, ½ gr.

Contains, per ton 2,000 lbs.: Gold, 208 8-24 dwts.; Silver, 2 1-20 grs.

Value per ton: Gold, $215.27; Silver, $2.65. $217.92

Charge $25.

GEO. W. PLATT, Assayer.
Per M. Waters.

QUARTZ.

New-York, January 6th, 1865.

1 lb. avdp., contains: ¼ gr. Gold; ¼ gr. Silver.

1 ton, 2,000 lbs., contains:	62½ dwts. Gold,	value:	$64.58
1 " " " "	1 gr. Silver,	"	1.29
			$65.87

Charge $10.
Paid.

GEO. W. PLATT, Assayer.
Per W. Waters.

New-York, December 29th, 1864.

Golconda Gold Company:

Two samples of *ore** of this Company, taken from their mines in Canada East, yielded on the average of the two samples, the following results:

Gold, per ton of 2000 lbs., . . .	3,326.10
Silver, " " " . . .	3.61
	$3,329.17

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*White quartz rock.

The samples of *talcose slate* yielded as follows:

Gold, per ton,	$503.88
Silver, "	9.92
	$513.80

Yours, respectfully,
JOHN TORREY.

Also, an assay was made by me of a *ferruginous clay*, from the same mines. This yielded gold, per ton, $445.

Charge for these assays, Forty Dollars ($40).

Received payment,
JOHN TORREY.

LATER ASSAYS.

NEW-YORK, Feb'y 15, 1865.

H. A. TUCKER, Esq.:

Dear Sir:—Three lots of ore from the Golconda Mines, Canada, assayed for you, contain gold as follows, per ton of 2,000 lbs.:

No. 1.	Small Keg	$372 23
2.	Box	201 62
3.	Large Keg	364 47

Yours, respectfully,
EDWARD N. KENT,
Chemist.

NEW YORK, Feb'y 16, 1865.

H. A. TUCKER, Esq.:

Dear Sir:—The sample of quartz from the Golconda Mines, Canada, assayed for you, contains gold to the value of $23.26 per ton of 2,000 lbs.

Yours respectfully,
EDWARD N. KENT,
Chemist.

New-York, Feb'y 17, 1865.

H. A. Tucker, Esq. :

Dear Sir :—The sample of quartz from Golconda Mines, Canada, assayed for you this day, contains gold to the value of $31.01 per ton of 2,000 lbs.

Yours respectfully,
EDWARD N. KENT,
Chemist.

New-York, Feb'y 17, 1865.

Statement of Samples of Assays of Ores from the Golconda Gold Mines.

No. 1.—*Talcose Slate*, contains, per lb. avdp. : 1½ grs. Silver; 2½ grs. Gold.

" *Talcose Slate*, contains, per ton 2,000 lbs. : 6¼ oz. Silver; $208\frac{8}{24}$ dwts. Gold.

Value per ton 2,000 lbs. : Silver, $8.08; Gold, $215.27.
$223.35.

No. 2.—*Shale Slate*, contains, per lb. avdp. : 2 grs.. Silver; 2 grs. Gold.

" *Shale Slate*, contains, per ton 2,000 lbs. : $8\frac{6}{20}$ oz. Silver; $166\frac{16}{24}$ dwts. Gold.

Value per ton 2,000 lbs. : Silver, $10. 73; Gold, $172.21.
$182.94.

No. 3.—*Yellow Clay*, contains, per lb. avdp. : 1 gr. Silver; 4 grs. Gold.

" *Yellow Clay*, contains, per ton 2,000 lbs. : $4\frac{3}{20}$ oz. Silver; $333\frac{8}{24}$ dwts. Gold.

Value per ton 2,000 lbs. : Silver, $5.36; Gold, $344.43.
$349.79.

GEO. W. PLATT,
Assayer.
Per M. Waters.

By Prof. Kent's Working Process.

Laboratory, No. 157 W. 14th St.,
New-York, March 17, 1865.

H. A. Tucker, Esq.:

Dear Sir:—I have made two assays of the crushed slate received from you, and find it to contain as follows:

Coarse gravel and lumps, per ton	$ 42 65
Finest portion, sifted, "	209 37

16 lbs. of the finest portion, obtained by sifting through a No. 50 sieve, and treated by my process, gave 32 grs. retorted amalgam, (herewith inclosed,) which equals $160 per ton or 76 per cent. of the assay value obtained by a practical working process.

By the addition of a little more pyritic ore to the slate, a still larger per centage would be obtained.

Yours respectfully,

EDWARD N. KENT,
Chemist.

New-York, March 21, 1865.

H. A. Tucker, Esq.,
Pres. Golconda Gold Co.:

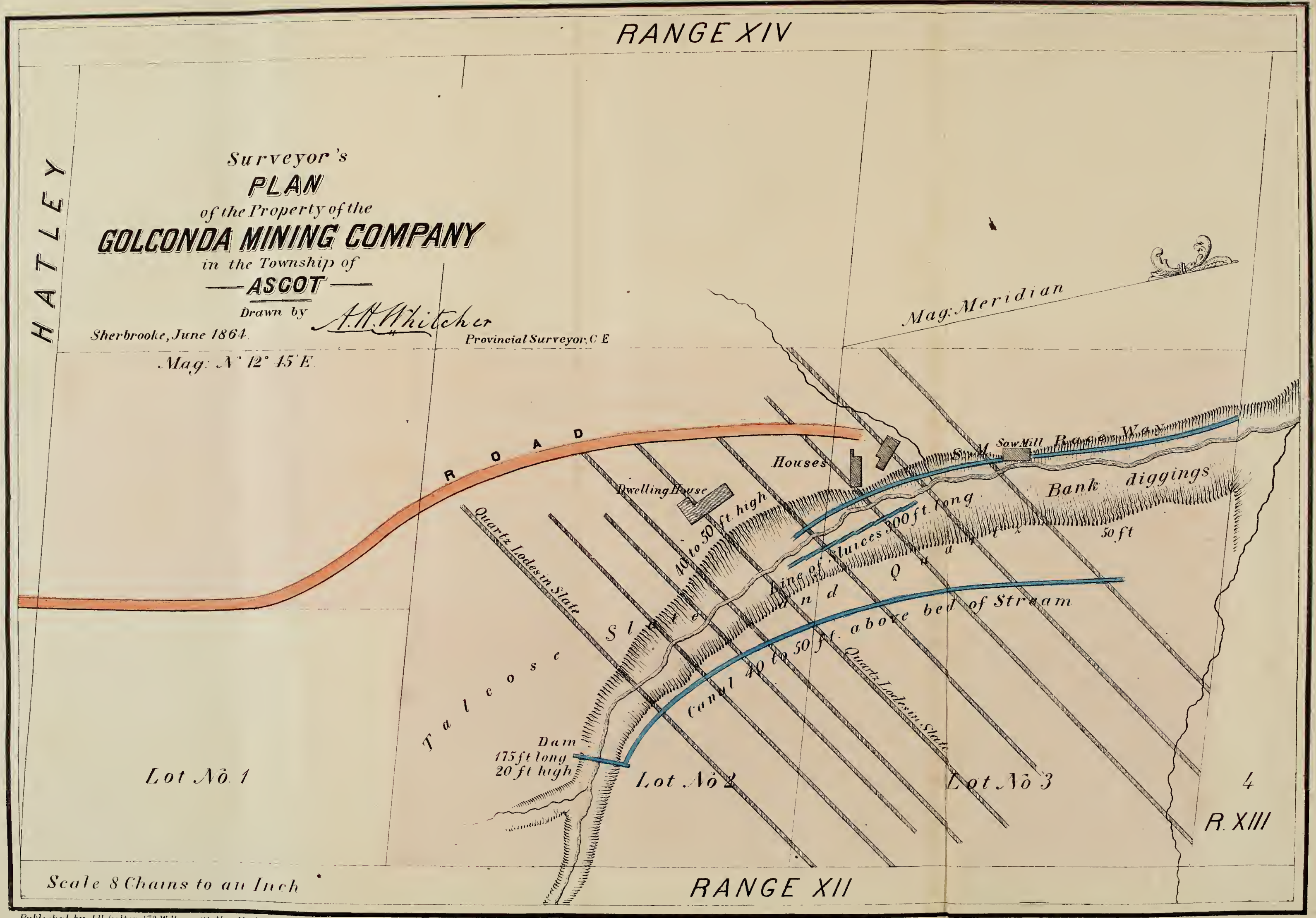
Sir:—The practical working of 50 lbs. of ore from your Mines by my machinery gave a yield of

32$\frac{3}{8}$ grs. Gold.
41$\frac{5}{8}$ grs. Silver.

Value of Gold and Silver per ton, $60.80-100.

The machinery through which this was worked is full size, and the waste of gold would be more, proportionally, than in working a larger amount of ore.

M. B. DODGE,
21 Broad St., New-York.



Surveyor's
PLAN
of the Property of the
GOLCONDA MINING COMPANY
in the Township of
ASCOT
Drawn by A. H. Whitcher
Provincial Surveyor, C. E.
Sherbrooke, June 1864.

Mag: N° 12° 45′ E.

Scale 8 Chains to an Inch

Published by J. H. Colton 172 William St New York